

REMARKS

This Application has been carefully reviewed in light of the Final Office Action mailed November 30, 2005. At the time of the Final Office Action, Claims 1-20 were pending in this Application. Claims 1-20 were rejected. Claims 1, 14, and 18 were cancelled without prejudice or disclaimer. Claims 2, 3, 5, 9, 11-13, 15, 17, and 19-20 have been amended, and Applicants respectfully request reconsideration and favorable action in this case.

Rejections under 35 U.S.C. §103

Claims 1, 2, 4, 9-12, 14, 15, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,467,702 issued to Malcolm David Dick Lambert et al. ("Lambert") in view of U.S. Patent 6,055,957 issued to Toshiyuki Hasegawa et al. ("Hasegawa"). Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, do not render the claimed embodiment of the invention obvious.

Claims 3, 13, 17, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lambert in view of Hasegawa, and further in view of U.S. Patent 6,811,105 issued to Masaaki Kato et al. ("Kato"). Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, do not render the claimed embodiment of the invention obvious.

Claims 5-8, 16, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lambert in view of Hasegawa, and further in view of U.S. Patent 6,199,539 issued to Samuel Pearlman et al. ("Pearlman"). Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, do not render the claimed embodiment of the invention obvious.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Furthermore, according to § 2143 of the Manual of Patent Examining Procedure, to establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Claims 5, 16, and 20 recite that "the valve needle has a guide for reducing rotational movements." A first premise of the rejection is that "Pearlman et al. ('539) teaches a slot and key guide (as per claim 6) in the form of a feather key (32, or 42) that engages in a needle guide (10) of the valve needle in a guide groove (38) in a hollow cylindrical surface in the valve body." *See* OA at 4. However, Pearlman et al. ('539) relates to a high-pressure fuel supply pipe for diesel engine fuel injectors. These fuel pipes are not and do not have valve needles. The first premise of the rejection incorrectly identifies the fuel pipe (10) as a needle guide. Thus, the rejection fails to cite prior art that disclose all claimed limitations. A second premise of the rejection is that "It would have been obvious to one skilled in the art at the time the invention was made to have modify the injector of Lambert et al. ('702) with the slot and key guide of Pearlman et al. ('539) in order to minimize rotation of a valve member in the injection device to reduce leaks, and to preserve the alignment of other components." However, Pearlman et al. ('539) expressly teaches away from the invention, wherein it states that "[t]o insure a fluid-tight joint between pipe end 24 and frusto-conical recess 26, the fuel pipe is subjected to an axial installation force by a nut 28." *See* '539 at 2:47-49. It further teaches that a fuel pipe problem arises "[d]uring the pipe installation process, [as] nut 28 is rotated by a suitable wrench, to apply an axial force to shoulder 30 of the fuel pipe. The frictional engagement force between the nut and shoulder 30 tends to rotate fuel pipe 10 in bore 12." *See* '539 at 2:53-56. Such rotation frictionally abrades grooves into the surface of recess 26 through which fuel leaks occur. Thus, Pearlman et al. ('539) teaches that the anti-rotation mechanism prevents grooves from being formed in the fuel pipe 10 as the *axial installation force* is applied by the nut. If these teachings were applied to the valve needles of Lambert and Hasegawa, the valve needles would be permanently fixed in the blind ends of

the nozzle bodies so as to render the needle valve inoperable as they would have no ability to unseat themselves from the blind ends of the nozzle bodies to inject fuel through orifices in the blind ends. Further, Hasegawa relates to “a rotary valve 7 and a drive system including an actuator 9 for driving this rotary valve 7 and a detector 11 for detecting the absolute angle (absolute angular position) of the rotary valve 7.” *See* ‘957 at 5:66 - 6:3. Hasegawa would be completely inoperable with an anti-rotation mechanism. Thus, the second premise of the rejection fails because there is no motivation to combine or modify the teachings of these references, in fact, the references teach away from such combination or modification.

Claims 2-4 and 6-13 depend from claim 5, claims 15 and 17 depend from claim 16, and claim 19 depends from claim 20. These dependent claims are allowable as depending from an allowable base claim, and also as containing independently patentable features. Applicants respectfully request the withdrawal of the rejections of these dependent claims.


CONCLUSION

Applicants have made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants respectfully request reconsideration of the claims as amended.

Applicants believe there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2690.

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